

Work Order ID 100679***100679***

Page 1

April-29-13 10:23:58 AM

Item ID: D4504-1

Accept

N9000040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Half Height Bubble Window, LH

Start Date: 4/29/13 Start Qty: 1.00

1

Cust Item ID:

Required Date: 4/30/13 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D4504

PA1

100

0.00

100

HAND FINISHING THERMOFORMING

Thermoform

Memo

0.00

Thermoforming Machine

Set up Machine as per folio FTA 142 and D4504 program

Dh
13/04/29

110

0.00

110

HAND FINISHING THERMOFORMING

Thermoform

Memo

0.00

Thermoforming Machine

Cut Blanks to 38" by 52"

Dh
13/04/29

Work Order ID 100679

April-29-13 10:23:58 AM

100679

Page 2

Item ID: D4504-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Half Height Bubble Window, LH

Start Date: 4/29/13 Start Qty: 1.00

1

Cust Item ID:

Required Date: 4/30/13 Req'd Qty: 1.00

1

Customer:

Reference:


Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
120	THERMOFORMING MACHINE					1			<i>DL</i>
Thermoform	Memo	0.00							13/04/29
Thermoforming Machine	Thermoform as per Dwg. D4504-1 and Folio FTA 142								
	Dwg. Rev. <u>A</u>								
	Folio Rev. <u>A.</u>								
	Visually inspect for proper formation and texture								
150		0.00							
150	HAND FINISHING THERMOFORMING					1			<i>DL</i>
Thermoform	Memo	0.00							13/04/29
Thermoforming Machine	1) Trim off excess flange material2) Buff out any light scratches or blemishes3) Etch part number and batch number								P10 → 13/04/29

W/O: 100679		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
13/04/29	150.	TRIM PER Mould. Do Not Buff out MARKS. (FOR TEST ONLY)	Wh	13/04/29	1	 2013/04/29	S 13/04/29

Part No: D4504-1 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Page 3

Dr
13/04/30

Work Order ID 100679

100679

Page 4

April-29-13 10:23:58 AM

Item ID: D4504-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Half Height Bubble Window, LH

Start Date: 4/29/13 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 4/30/13 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

13/5/16
RJ 13-04-30

Picklist Print

April-29-13 10:23:58 AM

Page 1

Work Order ID: 100679

Parent Item: D4504-1

Parent Item Name: Half Height Bubble Window, LH

Start Date: 4/29/13

Required Date: 4/30/13

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev. A New Issue 12/02/16 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MACRLICS.236 Plexiglass G .236"		Purchased	No			110	sf	333.7280	13.75	14.473684			

Location

Loc Qty

Loc Code

therm

333.728

122537

97.99

122582

37.012

124834

198.726

14.48 sq ft.

15/04/30

DART AEROSPACE LTD	Work Order:	
Description:	Part Number:	D4504-1
Inspection Dwg: D4504-1 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than _____"				
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: <i>Wh</i>	Date: 13/04/29
------------------------	----------------

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.090"	M.N	0.112"	✓			
0.070"	M.N	0.096"	✓			
0.050"	M.N	0.046"		✓		
46.0"	+/- 0.100	46.5"		✓		TRIM per mould.
29.1"	+/- 0.100	29.785"		✓		

Measured by: <i>[Signature]</i>	Date: <i>Wh 13/04/29</i>
Audited by: <i>[Signature]</i>	Date: 13.4.29
Prototype Approval:	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/DL	

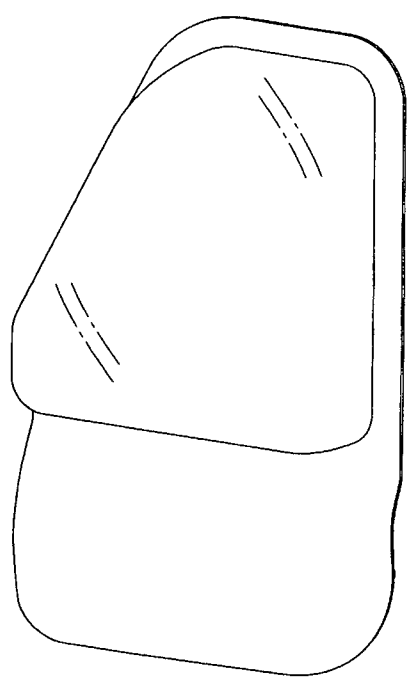
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D

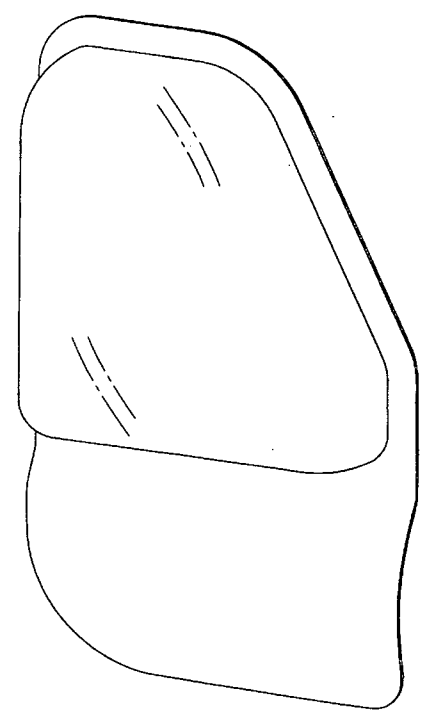
C

B

A



D4504-1 HALF HEIGHT BUBBLE WINDOW (LH)



D4504-2 HALF HEIGHT BUBBLE WINDOW (RH)

190679

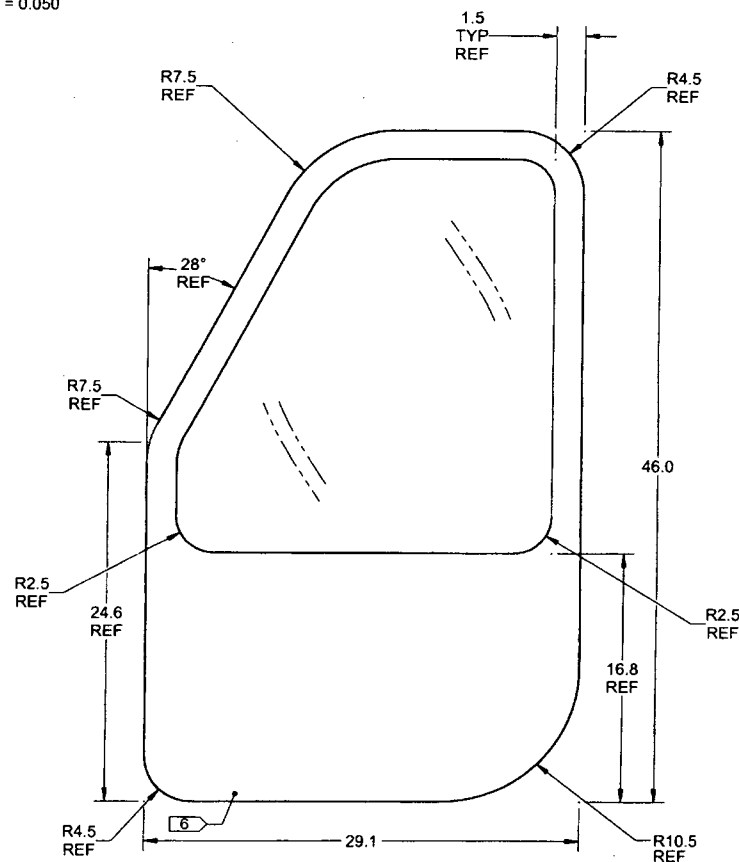
RELEASED
2012-03-08

A		NEW ISSUE		AP	12.03.01
REV.		DESCRIPTION		BY	DATE
DESIGN	AP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWN	AP	DRAWING NO. D4504		REV. A	
CHECKED	AP	TITLE		SCALE	
MFG. APPR.	AP	HALF HEIGHT BUBBLE WINDOW		NTS	
DE APPR.	AP	COPYRIGHT © 2012 BY DART AEROSPACE LTD THE DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			
DATE	12.03.01				

8 7 6 5 4 3 2 1

MAX DEPTH = 15.0 ± 0.5
 7.2
 MIN THICKNESS = 0.050

3.0
 MIN THICKNESS = 0.070
 5.0
 MIN THICKNESS = 0.090
 0.236
 REF



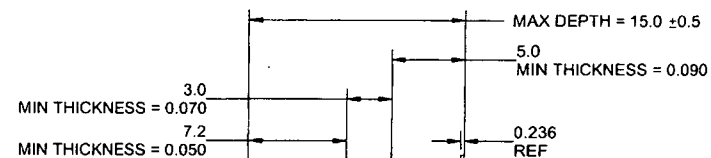
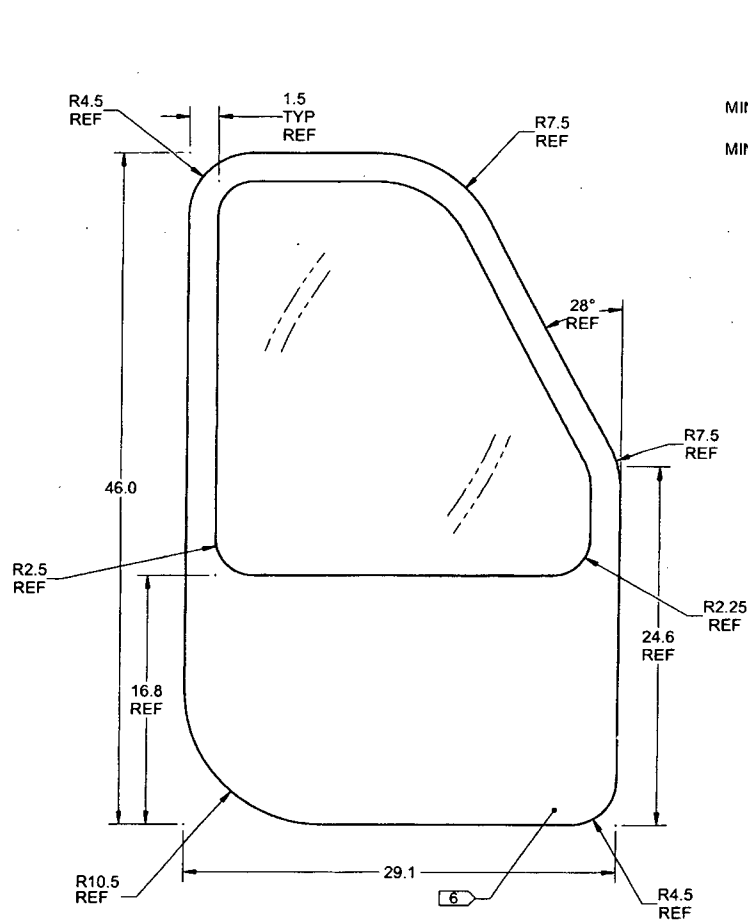
D4504-1 HALF HEIGHT BUBBLE WINDOW (LH)

NOTES:

- 1) MATERIAL: PLEXIGLASS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C OR POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425, 0.236 THICK (REF. DART SPEC. M-ACRYLIC-S.236)
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.010 TO 0.020 MAX
- 6) IDENTIFICATION: ENGRAVE P/N "D4504-1" & B/N "BXXXXX" ON THE INSIDE SURFACE WITHIN 0.50" OF BOTTOM EDGE. USE 0.125" LETTERS TO MAX. DEPTH OF 0.005" PER QSI 044 6.4 WITH VIBRATING STYLUS
- 7) WEIGHT: 11.0 lbs
- 8) THERMOFORM PER DART QSI 022 USING DT8992 & DT9795

RELEASED
 2012-03-08
 JWP

DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED	<i>[Signature]</i>	DRAWING NO. D4504	REV. A
MFG. APPR.	<i>[Signature]</i>	SHEET 2 OF 3	
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	HALF HEIGHT BUBBLE WINDOW	NTS
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D4504-2 HALF HEIGHT BUBBLE WINDOW (RH)

NOTES:

- 1) MATERIAL: PLEXIGLASS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C OR POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425, 0.236 THICK (REF. DART SPEC. M-ACRYLIC-S.236)
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.010 TO 0.020 MAX
- 6) IDENTIFICATION: ENGRAVE P/N "D4504-2" & B/N "BXXXXX" ON THE INSIDE SURFACE WITHIN 0.50" OF BOTTOM EDGE. USE 0.125" LETTERS TO MAX. DEPTH OF 0.005" PER QSI 044 6.4 WITH VIBRATING STYLUS
- 7) WEIGHT: 11.0 lbs
- 8) THERMOFORM PER DART QSI 022 USING DT9794 & DT9796

RELEASED
2012-03-08

DESIGN	RP	DART AEROSPACE LTD	
DRAWN	RP	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4504	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		HALF HEIGHT BUBBLE WINDOW	NTS
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